

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 3 and 14, as set forth in the listing of claims that follows:

1. (Currently Amended) A method for making a diesel particulate filter, comprising:

providing a wall-flow substrate comprising an inlet channel and an outlet channel and a porous wall separating the inlet channel and the outlet channel, said porous wall comprising an inlet wall surface adjacent the inlet channel and an outlet wall surface adjacent the outlet channel, said wall-flow substrate being characterized by a thickness between the inlet wall surface and the outlet wall surface and an average pore size between 5 micrometers and 500 micrometers;

forming a first slurry of a promoter oxide precursor and a refractory inorganic oxide;

calcining the first slurry to form a supported promoter;

combining a noble metal solution and the supported promoter to form a second slurry;

calcining the second slurry to form a catalyst composition, said catalyst composition having an average particle diameter of about 2 micrometers to about 10 micrometers, wherein the particle size is about 10% to about 80% of the average pore size;

applying the catalyst composition to the inlet wall surface of the wall-flow substrate and not to the outlet wall surface; and

calcining the substrate to form the diesel particulate filter ~~catalytic element~~, wherein the catalyst composition penetrates less than or equal to about 25% of the thickness of the porous wall.

2. (Cancelled)

3. (Currently Amended) The method of Claim 1 2, wherein the average composition particle size is about 20% to about 50% of the average pore size.

4. (Currently Amended) The method of Claim 3, wherein the average composition particle size is about 25% to about 35% of the average pore size.

5. (Original) The method of Claim 1, wherein the catalyst composition loading is about 1.2 g/L of substrate volume to about 122 g/L of substrate volume.

6. (Previously Presented) The method of Claim 1, wherein the diesel particulate filter has less than or equal to an about 15°C increase in a balance point temperature after aging at 650°C for 50 hours.

7. (Previously Presented) The method of Claim 1, wherein the diesel particulate filter has less than or equal to an about 35°C increase in a balance point temperature after aging at 700°C for 16 hours in 10% steam.

8. (Previously Presented) The method of Claim 1, wherein the diesel particulate filter has less than or equal to an about 70°C increase in a balance point temperature after aging at 800°C for 25 hours in 10% steam.

9-12. (Canceled)

13. (Previously Presented) The method of Claim 1, wherein the second slurry comprises a noble metal selected from the group consisting of platinum, palladium, and a combination comprising at least one of the foregoing noble metals.

14. (Currently Amended) ~~The method of Claim 13,~~ A method for making a diesel particulate filter, comprising:

providing a wall-flow substrate comprising an inlet channel and an outlet channel and a porous wall separating the inlet channel and the outlet channel, said porous wall comprising an inlet wall surface adjacent the inlet channel and an outlet wall surface adjacent the outlet channel, said wall-flow substrate being characterized by a thickness between the inlet wall surface and the outlet wall surface and an average pore size between 5 micrometers and 500 micrometers;

forming a first slurry of a promoter oxide precursor and a refractory inorganic oxide, wherein the promoter oxide precursor comprises an element selected from the group consisting of vanadium, chromium, manganese, iron, cobalt, copper, zinc, nickel, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and a combination comprising at least one of the foregoing elements;

calcining the first slurry to form a supported promoter;

combining a noble metal solution and the supported promoter to form a second slurry, wherein the second slurry comprises a noble metal selected from the group consisting of platinum, palladium, and a combination comprising at least one of the foregoing noble metals;

calcining the second slurry to form a catalyst composition, said catalyst composition having an average particle diameter of about 2 micrometers to about 10

micrometers, wherein the particle size is about 10% to about 80% of the average pore size;

applying the catalyst composition to the inlet wall surface of the wall-flow substrate and not to the outlet wall surface; and

calcining the substrate to form the diesel particulate filter, wherein the catalyst composition penetrates less than or equal to about 25% of the thickness of the porous wall.

15. (Previously Presented) The method of Claim 14, wherein the refractory inorganic oxide is selected from the group consisting of aluminum oxide, doped aluminum oxide, titanium oxide, zirconium oxide, and a combination comprising at least one of the foregoing refractory inorganic oxide components.

16. (Previously Presented) The method of Claim 15, wherein the refractory inorganic oxide is selected from the group consisting of delta aluminum oxide, silica doped aluminum oxide, lanthanum doped aluminum oxide, and a combination comprising at least one of the foregoing refractory inorganic oxide components.

17-26. (Cancelled)